General and Comparative Endocrinology

An International Journal

Editors-in-Chief FRANK L. MOORE IAN W. HENDERSON

Published under the Auspices of the Division of Comparative Endocrinology of the American Society of Zoologists, and the European Society for Comparative Endocrinology

> Volume 90 1993



ACADEMIC PRESS, INC.

San Diego New York Boston London Sydney Tokyo Toronto

Copyright © 1993 by Academic Press, Inc. All Rights Reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (27 Congress Street, Salem, Massachusetts 01970), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1993 articles are as shown on the article title pages; if no fee code appears on the title page, the fee code is the same as for current articles.

0016-6480/93 \$4.00

MADE IN THE UNITED STATES OF AMERICA

This journal is printed on acid-free paper.



Contents of Volume 90

NUMBER 1, APRIL 1993

MICHEL BUDA, MICHAMAD MORRA, LAURA VAGLINI,	
ALDO FASOLO, AND HUBERT VAUDRY. In Vitro Study of Catecholamine Re-	
lease from Perifused Frog Adrenal Slices	1
3. SILVERIN, R. MASSA, AND K. A. STOKKAN. Photoperiodic Adaptation to	
Breeding at Different Latitudes in Great Tits.	14
V. S. B. YEUNG, H. CHEN, AND S. T. H. CHAN. In Vivo Effects of oLH and	
LHRH-Analog on Sex Reversal and Plasma Sex Steroid Profiles in the Female	22
Monopterus albus	23
into Hepatocytes Isolated from Juvenile Rainbow Trout (Oncorhynchus mykiss)	21
PATRICIA A. JOHNSON AND SHU-YIN WANG. Characterization and Quantitation of	31
mRNA for the Inhibin α -Subunit in the Granulosa Layer of the Domestic Hen	43
Masato Hasumi, Hisaaki Iwasawa, and Yoshitaka Nagahama. Seasonal	43
Changes in Plasma Concentrations of Sex Steroids in the Salamander Hynobius	
nigrescens	51
AUGUST EPPLE, SEPP PORTA, BARBARA NIBBIO, AND G. LEITNER. Release of	31
Conjugated Catecholamines by the Adrenal Medulla Equivalent of the American	
Eel, Anguilla rostrata	58
R. McDonald and S. D. Bradshaw. Adrenalectomy and Steroid Replace-	50
ment in a Small Macropodid Marsupial, the Quokka (Setonix brachyurus): Met-	
abolic and Renal Effects	64
KAREN A. GLENNEMEIER AND PAUL LICHT. Binding Affinities of Thyroxine-	
Binding Proteins in Turtle Plasma	78
ROBERT M. DORES, DEBRA J. KANEKO, AND FRANCIS SANDOVAL. An Anatomical	
and Biochemical Study of the Pituitary Proopiomelanocortin Systems in the	
Polypteriform Fish Calamoichthys calabaricus	87
ELSA M. AGUINIGA AND DANIEL F. STIFFLER. Interrenal Function in Larval Am-	
bystoma tigrinum. III. Acid-Base Balance Responses	100
MICHAEL G. WADE AND GLEN VAN DER KRAAK. Arachidonic Acid and Prosta-	100
glandin E ₂ Stimulate Testosterone Production by Goldfish Testis in Vitro	109
EBERHARD GWINNER, INGRID SCHWABL-BENZINGER, HUBERT SCHWABL, AND	
JOHN DITTAMI. Twenty-Four Hour Melatonin Profiles in a Nocturnally Mi-	110
grating Bird during and between Migratory Seasons	119
SLAVICA KRANTIC, FRANÇOIS DUBÉ, AND PIERRE GUERRIER. Evidence for a New	125
Subtype of Serotonin Receptor in Oocytes of the Surf Clam Spisula solidissima	123
Number 2, May 1993	
B. Fuentes, J. C. Calvo, E. H. Charreau, and J. A. Guzmán. Seasonal Variations in Testicular LH, FSH, and PRL Receptors; in Vitro Testosterone	
Production; and Serum Testosterone Concentration in Adult Male Vizcacha	
	133
(Lagostomus maximus maximus)	100
Brain, Liver, Gill, Heart and Muscle of Atlantic Salmon (Salmo salar) during	
Photoperiodically-Induced Parr–Smolt Transformation. I. Outer- and Inner-Ring	
Thyroxine Deiodination.	142
Injionino Delouination	

J. G. EALES, PP. MORIN, P. TSANG, AND T. J. HARA. Thyroid Hormone Deiodination in Brain, Liver, Gill, Heart and Muscle of Atlantic Salmon (<i>Salmo salar</i>) during Photoperiodically-Induced Parr–Smolt Transformation. II. Outerand Inner-Ring 3,5,3'-Triiodo-L-Thyronine and 3,3',5'-Triiodo-L-Thyronine (Re-	
verse T ₃) Deiodination	157
Territorial Interaction and Plasma Levels of Gonadal Steroids in Spawning Male Demoiselles <i>Chromis dispilus</i> (Pisces: Pomacentridae)	168
SAMANTHA J. RICHARDSON, ADRIAN J. BRADLEY, WEI DUAN, BRIDGET R. SOUTH- WELL, LYNNE SELWOOD, AND GERHARD SCHREIBER. The Expression of the Transthyretin Gene in Liver Evolved during the Radiation of Diprotodont Mar-	
supials in Australia	177
N. J. YOUNG, S. G. WEBSTER, AND H. H. REES. Ovarian and Hemolymph Ecdy-	
steroid Titers during Vitellogenesis in Macrobrachium rosenbergii	183
SANGHAMITRA BANDYOPADHYAY AND SAMIR BHATTACHARYA. Purification and Properties of an Indian Major Carp (Cirrhinus mrigala, Ham.) Pituitary Thyro-	
tropin.	192
R. J. LIEN AND T. D. SIOPES. The Relationship of Plasma Thyroid Hormone and	
Prolactin Concentrations to Egg Laying, Incubation Behavior, and Molting by	200
Female Turkeys Exposed to a One-Year Natural Daylength Cycle	205
Y. Takei, E. P. Silldorff, Y. Hasegawa, T. X. Watanabe, K. Nakajima,	
G. A. STEPHENS, AND S. SAKAKIBARA. New Angiotensin I Isolated from a	214
Reptile, Alligator mississippiensis	214
J. M. Mancera, P. Fernández-Llebrez, J. M. Grondona, and J. M. Pérez-	
Figares. Influence of Environmental Salinity on Prolactin and Corticotropic	220
Cells in the Gilthead Sea Bream (Sparus aurata L.)	220
WILLIAM S. MARSHALL, SHARON E. BRYSON, AND DAVID R. IDLER. Gonadotropin Action on Brook Trout Sperm Duct Epithelium: Ion Transport Stimulation Mediated by cAMP and Ca ²⁺	222
Tomas J. Ekström, Britt Marie Bäcklin, Ylva Lindqvist, and Wilhelm	232
ENGSTRÖM. Insulin-like Growth Factor II in the Mink (<i>Mustela vison</i>): Determination of a cDNA Nucleotide Sequence and Developmental Regulation of Its	
Expression	243
M. REINECKE AND C. MAAKE. A Phylogenetic Survey of Pancreastatin and Chro-	2.15
mogranin Immunoreactivity in Chromaffin (TH-, DBH-, and PNMT-	
Immunoreactive) Cells of the Adrenal Organ of Vertebrates	251
	231
Number 3, June 1993	
PHULJHURI CHAKRABARTI AND DILIP MUKHERJEE. Studies on the Hypocalcemic Actions of Salmon Calcitonin and Ultimobranchial Gland Extracts in the Fresh-	
water Teleost Cyprinus carpio	267
DEBIANI GHOSH AND ARUN K. RAY. Subcellular Action of Estradiol-17β in a	
Freshwater Prawn, Macrobrachium rosenbergii. Tomoko Hayashi, Yoichi Hanaoka, and Hiroaki Hayashi. Simple N-Linked	274
Sugar Chains Are Bound to the Lutropin of the Bullfrog Rana catesbeiana.	282
B. Moses Okot-Kotber, Glenn D. Prestwich, Alain Strambi, and Colette Strambi. Changes in Morphogenetic Hormone Titers in Isolated Workers of	202

KH. TOMASCHKO AND D. BÜCKMANN. Excessive Abundance and Dynamics of	
Unusual Ecdysteroids in <i>Pycnogonum litorale</i> Ström (Arthropoda, Pantopoda) C. Peng, S. Humphries, R. E. Peter, J. E. Rivier, A. G. Blomqvist, and D.	296
LARHAMMAR. Actions of Goldfish Neuropeptide Y on the Secretion of Growth	
Hormone and Gonadotropin-II in Female Goldfish.	306
X. QIN AND H. KLANDORF. Effect of Estrogen in Relation to Dietary Vitamin D ₃ and Calcium on Activity of Intestinal Alkaline Phosphatase and Ca-ATPase in	
Immature Chicks	318
in the Female Turtle, <i>Trachemys scripta</i> , in Relation to the Reproductive Stage	328
I. N. SERGEEV, R. BUFFENSTEIN, AND J. M. PETTIFOR. Vitamin D Receptors in a	320
Naturally Vitamin D-Deficient Subterranean Mammal, the Naked Mole Rat	
(Heterocephalus glaber): Biochemical Characterization	338
ROBERT M. DORES, TOYOHIKO NOSO, MARIANN RAND-WEAVER, AND HIROSHI	
KAWAUCHI. Isolation of Prolactin and Growth Hormone from the Pituitary of the Holostean Fish <i>Amia calva</i>	346
the Holostean Fish <i>Amia calva</i>	340
tivation and Suppression of LH Release in Japanese Quail	355
LILIANE SCHOOFS, G. MARK HOLMAN, PAUL PROOST, JO VAN DAMME, HEDWIG	
NEVEN, ROB C. H. M. OUDEJANS, AND A. DE LOOF. Isolation, Identification,	
and Synthesis of AKH-I ⁴⁻¹⁰ from Locusta migratoria	364
B. SENTHILKUMARAN AND K. P. JOY. Annual Variations in Hypothalamic Sero-	
tonin and Monoamine Oxidase in the Catfish <i>Heteropneustes fossilis</i> with a Note on Brain Regional Differences of Day–Night Variations in Gonadal Preparatory	
Phase	372
Note	0,2
CUNMING DUAN, YASUHIRO TAKEUCHI, NAOTO HANZAWA, AND SHIGETOH	
MIYACHI. Epidermal Growth Factor Stimulates Protein Synthesis in Pri-	
mary Cultures of Salmon Hepatocytes	383
BOOK REVIEWS Brown-Séquard, A Visionary of Science. By Michael J. Aminoff	389
ROBERT M. Dores. Pro-Protein and Pro-Hormone Convertases. Edited by	309
Nabil G. Seidah	390
Announcement	391
AUTHOR INDEX FOR VOLUME 90	392

NOTICE

The Subject Index for Volume 90 will appear in the December 1993 issue as part of a cumulative index for the year 1993.

